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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/902,224 | 07/10/2001 | Shinya Tsukizaki | SCED 18.553 | 7633 |

26304 7590 02/01/2011

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| EXAMINER | |
|---|---|
| REPKO, JASON MICHAEL | |
| ART UNIT | PAPER NUMBER |
| 2628 | |
| MAIL DATE | DELIVERY MODE |
| 02/01/2011 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/902,224 | TSUKIZAKI, SHINYA | |
| | Examiner | Art Unit | |
| | JASON M. REPKO | 2628 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *08 December 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-3,6-15 and 17-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,6-15 and 17-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

### Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8 December 2010 has been entered.

### Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. The factual inquiries set forth in Graham **v.** John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**4. Claims 1-3, 6-15, and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,325,717 to Kawagoe et al. in view of U.S. Patent No. 6,377,264 to Iizuka et al.**

Claim 1

5. Regarding claim 1, Kawagoe et al. discloses "a recording medium (20 shown in Figure 1) comprising a recorded program and data to be used in a program execution system (40) including a program execution device that executes various programs (col.7 ll.3-7: "The external ROM 21 includes a plurality of memory areas (may be hereinafter referred merely to as "areas"), i.e., a program area 22, an image data area 23 and a sound memory area 24, which are memorized previously and fixedly with various programs."), at least one operation device into which are inputted operation requests by a user as operation instructions to said program execution device (col.6 ll.21-24: "The joystick 45 includes X-axis and Y-axis photo-interrupters in order to decompose a lever inclination into X-axis and Y-axis components, generating pulses in number proportional to the inclination."), wherein

a. along with a motion of any character on a display device, based on an operation instruction about a character motion direction (col.6 ll.31-35: " Accordingly, the resultant X-axis and Y-axis vector determined by the count values of the counters 444X and 444Y serves to determine a moving direction and a coordinate position of the player object or hero character or a cursor."), a switching (col.14 ll.42-*44: "...the camera is switched* depending upon a position of the player object (X-*Y coordinate position)...."*) is made from a first fixed viewing (col.13 ll.53-*56: "...the fifth camera is a fixed camera..."*) perspective to a second fixed viewing perspective (col.14 ll.15-*16: "...the fourth camera fixedly provided at the position shown in FIG. 11..."*) on said display device (col.13 ll.16-23: "Note that in FIG. 11 the terms "first camera", "second camera", . . . , "fifth camera" *given in blocks...when the player object is existing in one block, the player object will be* taken by a camera corresponding to a camera code having been set on that block.").

6. Kawagoe et al. discloses two operative control modes where the player continues the action and one where the player has stopped an action in col.12 ll.37-46:

> If in a course of action, a position and pose of the player object are determined so that the player object cont*inues its action... If the player object is not in a course of action,* the CPU 11 in the following step S503 detects an operation state of the joystick 45 (FIG. 1, FIG. 4) included in the controller 40. Subsequently, a moving direction, moving speed and position and pose of the player object are determined respectively in steps S503, S504 and S505, according to an operation state of the joystick 45.

7. However, Kawagoe et al. does not expressly disclose "said recorded program has a direction maintenance step by which if, said operation instruction is maintained, the direction of motion of said character in said second fixed viewing perspective is maintained in coordination with the direction of motion of the character on a map in said first fixed viewing perspective at least immediately before the switching is made."

8. Regarding claim 1, Iizuka et al. disclose "at least one operation device" (movement processing unit 1002) "into which are inputted operation requests by a user as operation instructions" (the direction and stroke input to 1002 as described at col.9 ll.3-6: "The movement processing unit 1002 calculates position coordinates of the player character in the virtual 3-D space based on the indicated moving direction and the stroke. ")

b. "said recorded program has a direction maintenance step by which if," "based on an operating instruction about a character motion direction" (*"movement indicating manipulation" as described at col.9 ll.59-62, including a direction and "tiling stroke"* col.8 ll.60-64) "so long as said operation instruction is maintained (Step 1402, Fig. 14;

*Iizuka's player must also supply movement*-indicating manipulation; otherwise, the character would not move, and thus, the direction of motion would not be maintained), the direction of motion of said character in said second fixed viewing perspective is maintained in coordination with the direction of motion of the character on a map in said first fixed viewing perspective at least as determined immediately before the switching is made" (col.10 ll.29-36: "As described above, the present embodiment allows the direction in which the player character is to move to be fixed even if the input direction with respect to the direction of line of sight changes within the specific area when the moving direction of the player character is decided by the input direction with respect to the direction of line of sight"; the direction in the image changes due to the camera change even though the input direction is fixed with respect to the first camera as described at col.8 ll.45-49: "Further, when the input direction of the directional key is fixed, the direction in which the player character is to move changes in a game picture *presented while moving the virtual cameras (line of sight) as shown in FIG. 9."*).

9. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use Iizuka's directional control in the game system disclosed by Kawagoe et al. The motivation for doing so would have been to eliminate the need for a player to abruptly change the direction on the joystick to accommodate a change in camera angle as the player traverses the camera area.

10. Furthermore, Iizuka's processing associated with specific sections (steps 1405, 1406, and 1407) is similar to Kawagoe's actions (S502) in that the position of the player character is computed from predefined instructions. Kawagoe et al. discloses determining position based on

action data (S502: determine Position and pose of player object depending on action content) and only after the action is finished, a direction of motion of the character is calculated and its position then determined based on a position of the character and a motion direction from the operation instruction (col.12 ll.44-46: "Subsequently, a moving direction, moving speed and position and pose of the player object are determined respectively in steps S503, S504 and S505, according to an operation state of the joystick 45."). The difference between Iizuka and Kawagoe is that Kawagoe's uses the input direction after the action is finished while keeping the camera perspective fixed.

11. At the time of the invention, it would have been obvious allow Kawagoe's user to input subsequent directions relative to the new fixed viewpoint, after initially maintaining the direction while the switching the camera as taught by Iizuka. In particular, Iizuka explains maintaining the player's direction after switching cameras eliminates the need for the user to synchronize a change in input direction with the change in camera orientation. See Iizuka col.8 ll.50-56. After the new viewpoint has been fixed as in Kawagoe's areas and the user enters subsequent operation instructions, Iizuka's method of substituting programmed directions for user input is no longer needed. Therefore, one of ordinary skill in the art would have been motivated to return control to the user when "the operation instruction is changed to another operating instruction, after the switching of the viewing perspective," because returning control to the user would allow the user to explore, in all directions, the region imaged by the second fixed camera. Doing so would have been consistent with Kawagoe's teachings at col.12 ll.44-46 and Figure 5, which also returns control to the player after an action has been performed. Therefore, it would have been obvious to combine Kawagoe and Iizuka to obtain "only thereafter, when the operation

instruction is changed to another operation instruction, after the switching of the viewing perspective, a direction of motion of the character is calculated based on the second fixed viewing perspective, and its position then determined based on a position of the character and a motion direction from the operation instruction."

Claim 2

12. Regarding claim 2, Kawagoe et al. discloses "said first fixed viewing perspective on said display device is to be drawn based on a coordinate transformation based on a first viewpoint and said second fixed viewing perspective on said display device is to be drawn based on a coordinate transformation based on a second viewpoint" (col.6 ll.31-35: " Accordingly, the resultant X-axis and Y-axis vector determined by the count values of the counters 444X and 444Y serves to determine a moving direction and a coordinate position of the player object or hero character or a cursor."; col.11 ll.26-31: "In the step S7 a camera process is carried out. For example, a coordinate of a visual point to the object is calculated such that a line or field of sight as viewed through a viewfinder of the virtual camera comes to an angle designated through the joystick 45 by the player.").

13. Kawagoe et al. does not expressly disclose "said direction maintenance step has a computation step that computes said direction of motion of said character based on said first viewpoint."

14. Regarding claim 2, Iizuka et al. disclose "said direction maintenance step has a computation step that computes said direction of motion of said character based on said first viewpoint" (col.10 ll.29-36: "As described above, the present embodiment allows the direction in which the player character is to move to be fixed even if the input direction with respect to the

direction of line of sight changes within the specific area when the moving direction of the player character is decided by the input direction with respect to the direction of line of sight"; the direction in the image changes due to the camera change even though the input direction is fixed with respect to the first camera as described at col.8 ll.45-49: "Further, when the input direction of the directional key is fixed, the direction in which the player character is to move changes in a *game picture presented while moving the virtual cameras (line of sight) as shown in FIG. 9."*) The proposed combination as well as the motivation for combining the references presented in the rejection of the parent claim applies to this claim and is incorporated herein by reference.

Claim 14

15. Regarding claim 14, Kawagoe et al. discloses an action is maintained for as long as said operation instruction is maintained by the user (col.12 ll.37-46).

16. Kawagoe et al. does not expressly disclose "said direction of motion of said character in said second fixed viewing perspective is maintained for as long as said operation instruction is maintained by said user."

17. Regarding claim 14, Iizuka et al. disclose "said direction of motion of said character in said second fixed viewing perspective is maintained for as long as said operation instruction is maintained by said user" (the motion is maintained as described at col.10 ll.29-36: "As described above, the present embodiment allows the direction in which the player character is to move to be fixed even if the input direction with respect to the direction of line of sight changes within the specific area when the moving direction of the player character is decided by the input direction with respect to the direction of line of sight"; the input direction is fixed as descirbed at col.8 ll.45-49: "Further, when the input direction of the directional key is fixed, the direction in which

the player character is to move changes in a game picture presented while moving the virtual *cameras (line of sight) as shown in FIG. 9."*). The proposed combination as well as the motivation for combining the references presented in the rejection of the parent claim applies to this claim and is incorporated herein by reference.

Claim 15

18. Claim 15 is met by the combination of Kawagoe et al. and Iizuka et al., wherein Iizuka et al. discloses "said character motion direction is continuous from said first fixed viewing perspective to said second fixed viewing perspective" (col.10 ll.29-36: "As described above, the present embodiment allows the direction in which the player character is to move to be fixed even if the input direction with respect to the direction of line of sight changes within the specific area when the moving direction of the player character is decided by the input direction with respect to the direction of line of sight"). The proposed combination as well as the motivation for combining the references presented in the rejection of the parent claim applies to this claim and is incorporated herein by reference.

Claim 19

19. Claim 19 is met by the combination of Kawagoe et al. and Iizuka et al., wherein Kawagoe et al. discloses "switching from the first fixed viewing perspective to the second viewing perspective is discontinuous" (col.14 ll.13-20: "As will be understood from FIG. 18, the fourth camera fixedly provided at the position shown in FIG. 11, in the step S620 wherein at immediately after camera change over, takes as a distant view the player object entering the door. That is, the fourth camera takes a comparatively wide range including the player object.").

The proposed combination as well as the motivation for combining the references presented in the rejection of the parent claim applies to this claim and is incorporated herein by reference.

Claim 3

20. Regarding claim 3, Kawagoe et al. discloses "a recording medium comprising a program and data recorded (20 shown in Figure 1; col.7 ll.3-7: "The external ROM 21 includes a plurality of memory areas (may be hereinafter referred merely to as "areas"), i.e., a program area 22, an image data area 23 and a sound memory area 24, which are memorized previously and fixedly with various programs.") thereon and which are to be used in a program execution system including a program execution device (44 of Figure 1) that executes various programs (10 in Figure 1), at least one operation device (45 of Figure 1) into which are inputted operation requests by a user as operation instructions (S503-S506 of Figure 9) to said program execution device (44 of Figure 1), and a display device that displays images output from said program execution device (30 as shown in Figure 1), wherein said program comprises:

c. a first computation step which determines at least position coordinates of a character in a scene on the display device from a motion vector of the character based on an operation inputted by the user (col.6 ll.31-35: " Accordingly, the resultant X-axis and Y-axis vector determined by the count values of the counters 444X and 444Y serves to determine a moving direction and a coordinate position of the player object or hero character or a cursor.") as seen from a first viewpoint (col.11 ll.26-31: "In the step S7 a camera process is carried out. For example, a coordinate of a visual point to the object is calculated such that a line or field of sight as viewed through a viewfinder of the virtual camera comes to an angle designated through the joystick 45 by the player."),

d. a viewpoint switching step that switches viewpoints if necessary, based on said position coordinates of said character (col.14 ll.42-*44: "...the camera is switched* depending upon a position of the player object (X-*Y coordinate position)...."*),

e. a second computation step which determines at least position coordinates of the character in the scene on the display device from a motion vector of the character based on an operation inputted by the user (col.6 ll.31-35) as seen from a second viewpoint switched by the viewpoint switching step (col.11 ll.26-31; col.13 ll.16-23: "Note that in FIG. 11 the terms "first camera", "second camera", . . . , "fifth camera" given in *blocks...when the player object is existing in one block, the player object will be taken by* a camera corresponding to a camera code having been set on that block."),

f. an image drawing step that draws a three-dimensional image of said character based on said current viewpoint, in accordance with said position coordinates of said character obtained by said first computation step and said second computation step (col.2 ll.6-10: "…image signal generating means for generating an image signal due to shooting the player object by a virtual camera selected by the camera selecting means.").

21. Kawagoe et al. discloses two operative control modes where the player continues the action and one where the player has stopped an action in col.12 ll.37-46.

22. Kawagoe et al. does not expressly disclose "wherein the second computation step to determine position coordinates of the character in the scene after switching the viewpoint, as long as an operation is inputted by the user before switching the viewpoint, by using the motion vector of the character motion based on the operation."

23. Regarding claim 3, Iizuka et al. disclose "wherein the second computation step to determine position coordinates of the character in the scene after switching the viewpoint, as long as an operation is inputted and maintained (*Step 1402, Fig. 14; Iizuka's player must also* supply movement-indicating manipulation; otherwise, the character would not move, and thus, the direction of motion would not be maintained) by the user before switching the viewpoint, (col.10 ll.29-36: "As described above, the present embodiment allows the direction in which the player character is to move to be fixed even if the input direction with respect to the direction of line of sight changes within the specific area when the moving direction of the player character is decided by the input direction with respect to the direction of line of sight"; the direction in the image changes due to the camera change even though the input direction is fixed with respect to the first camera as described at col.8 ll.45-49: "Further, when the input direction of the directional key is fixed, the direction in which the player character is to move changes in a game *picture presented while moving the virtual cameras (line of sight) as shown in FIG. 9."*) , by using the motion vector of the character motion based on the operation" (Fig. 8), and "only thereafter, when the operation instruction is changed to another operation instruction, after the switching of the viewing perspective, a direction of motion of the character is calculated based on the second fixed viewing perspective" (after switching viewpoints another operating instruction is obtained from 1105 when in an area as described at col.9 ll.8-15: " The specific area is a unit formed into the loop in the present embodiment. When the area judging unit 1003 judges that the player character is staying within the specific area, the movement processing unit 1002 calculates the position coordinates of the player character based on not the input direction

indicated by the directional key but on a movement instructing direction generated inside in place of the input direction").

24. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use Iizuka's directional control in the game system disclosed by Kawagoe et al. The motivation for doing so would have been to eliminate the need for a player to abruptly change the direction on the joystick to accommodate a change in camera angle as the player traverses the camera area.

25. Furthermore, Iizuka's processing associated with specific sections (steps 1405, 1406, and 1407) is similar to Kawagoe's actions (S502) in that the position of the player character is computed from predefined instructions. Kawagoe et al. discloses determining position based on action data (S502: determine Position and pose of player object depending on action content) and only after the action is finished, a direction of motion of the character is calculated and its position then determined based on a position of the character and a motion direction from the operation instruction (col.12 ll.44-46: "Subsequently, a moving direction, moving speed and position and pose of the player object are determined respectively in steps S503, S504 and S505, according to an operation state of the joystick 45."). The difference between Iizuka and Kawagoe is that Kawagoe's uses the input direction after the action is finished while keeping the camera perspective fixed.

26. At the time of the invention, it would have been obvious allow Kawagoe's user to input subsequent directions relative to the new fixed viewpoint, after initially maintaining the direction while the switching the camera as taught by Iizuka. In particular, Iizuka explains maintaining the player's direction after switching cameras eliminates the need for the user to synchronize a

change in input direction with the change in camera orientation. See Iizuka col.8 ll.50-56. After the new viewpoint has been fixed as in Kawagoe's areas and the user enters subsequent operation instructions, Iizuka's method of substituting programmed directions for user input is no longer needed. Therefore, one of ordinary skill in the art would have been motivated to return control to the user when "the operation instruction is changed to another operating instruction, after the switching of the viewing perspective," because returning control to the user would allow the user to explore, in all directions, the region imaged by the second fixed camera. Doing so would have been consistent with Kawagoe's teachings at col.12 ll.44-46 and Figure 5, which also returns control to the player after an action has been performed. Therefore, it would have been obvious to combine Kawagoe and Iizuka to obtain "only thereafter, when the operation instruction is changed to another operation instruction, after the switching of the viewpoints, a direction of motion of the character is calculated based on the second viewpoint, and its position then determined based on a position of the character and a motion direction from the operation instruction."

Claims 8 and 10

27. Regarding claim 8, Kawagoe et al. discloses "a program execution system (40 in Figure 1) comprising:

g. a program execution device (10 in Figure 1) having a controller, and executing various programs (col.7 ll.3-7: "The external ROM 21 includes a plurality of memory areas (may be hereinafter referred merely to as "areas"), i.e., a program area 22, an image data area 23 and a sound memory area 24, which are memorized previously and fixedly with various programs.");

h. at least one operation device (45 of Figure 1) into which are inputted operation requests by a user as operation instructions to said program execution device (S503-S506 of Figure 9);

i. a display device that displays images outputted from said program execution device (30 as shown in Figure 1).

28. The remainder of the claim recites limitations similar in scope to those presented in claim 3, and are rejected with the rationale presented in the rejection of claim 3.

29. Claim 10 recites limitations similar in scope to those presented in claim 8, and is rejected with the rationale presented in the rejection of claim 8. Kawagoe et al. discloses program execution device (10 in Figure 1). The proposed combination as well as the motivation for combining the references presented in the rejection of claim 8 applies to this claim and is incorporated herein by reference.

Claim 11

30. Claim 11 recites limitations similar in scope to those presented in claim 3 with exceptions (as discussed below), and those limitations are rejected with the rationale presented in the rejection of claim 3. The proposed combination as well as the motivation for combining the references presented in the rejection of claim 3 applies to this claim and is incorporated herein by reference.

31. Regarding the viewport switching step in claim 11, Kawagoe et al. discloses "said second viewpoint having associated therewith a second motion coordinate system that differs from said first motion coordinate system" (col.6 ll.31-35: "Accordingly, the resultant X-axis and Y-axis vector determined by the count values of the counters 444X and 444Y serves to determine a

moving direction and a coordinate position of the player object or hero character or a cursor."; col.11 ll.26-31: "In the step S7 a camera process is carried out. For example, a coordinate of a visual point to the object is calculated such that a line or field of sight as viewed through a viewfinder of the virtual camera comes to an angle designated through the joystick 45 by the player."). Cameras four and five have a different line of sight (col.14 ll.13-20). Thus, it follows that a second motion coordinate system that differs from said first motion coordinate system because "a line or field of sight as viewed through a viewfinder of the virtual camera comes to an angle designated through the joystick 45 by the player" (col.11 ll.26-31).

32. Regarding the second computation step in claim 11, Kawagoe et al. discloses "an image drawing step that draws a three dimensional image of said character" (S8 in figure 7; See FIGS. 16, 18 or 19 showing 3D images), "on said first or second display device viewpoint, in accordance with said position coordinates of said character obtained by said first computation step and said second computation step" (col.6 ll.31-35: "Accordingly, the resultant X-axis and Y-axis vector determined by the count values of the counters 444X and 444Y serves to determine a moving direction and a coordinate position of the player object or hero character or a cursor."; col.11 ll.26-31: "In the step S7 a camera process is carried out. For example, a coordinate of a visual point to the object is calculated such that a line or field of sight as viewed through a viewfinder of the virtual camera comes to an angle designated through the joystick 45 by the player.").

33. Regarding the second computation step in claim 11, Kawagoe et al. does not disclose "said motion vector based on an operation inputted by the user as seen from said second

viewpoint by said maintained operation instruction in accordance with said first motion coordinate system."

34. Iizuka et al. disclose "operation inputted by the user as seen from said second viewpoint by said maintained operation instruction in accordance with said first motion coordinate system" (col.10 ll.29-36: "As described above, the present embodiment allows the direction in which the player character is to move to be fixed even if the input direction with respect to the direction of line of sight changes within the specific area when the moving direction of the player character is decided by the input direction with respect to the direction of line of sight"; the direction in the image changes due to the camera change even though the input direction is fixed with respect to the first camera as described at col.8 ll.45-49: "Further, when the input direction of the directional key is fixed, the direction in which the player character is to move changes in a game *picture presented while moving the virtual cameras (line of sight) as shown in FIG. 9."; Fig. 8*).

35. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to base the motion vector on an operation inputted by the user as seen from said second viewpoint by said maintained operation instruction in accordance with said first motion coordinate system because knowledge of that motion vector with respect to the first viewpoint is useful, if not essential, in maintaining the direction of the action across camera areas. Moreover, at the time of the invention, it would have been obvious to a person of ordinary skill in the art to use Iizuka's directional control in the game system disclosed by Kawagoe et al. The motivation for doing so would have been to eliminate the need for a player to abruptly change the direction on the joystick to accommodate a change in camera angle as the player traverses the camera area.

Therefore, it would have been obvious to combine Kawagoe with Iizuka et al. to obtain the invention specified in claim 11.

Claim 12

36. Regarding claim 12, Kawagoe et al. discloses "said motion vector of said character in said second display device viewpoint is determined in accordance with said second motion coordinate system once said maintained operation instruction is terminated" (col.12 ll.37-*46: "If* the player object is not in a course of action, the CPU 11 in the following step S503 detects an operation state of the joystick 45 (FIG. 1, FIG. 4) included in the controller 40. Subsequently, a moving direction, moving speed and position and pose of the player object are determined respectively in steps S503, S504 and S505, according to an operation state of the joystick 45"). Specifically, once the moving direction is determined according to the current viewpoint, and the user reenters an operation state of the joystick then the action is determined with respect to the new viewpoint as shown by col.11 ll.26-31. See also Kawagoe's discussion of exiting one area and entering another in col.13 ll.55-65, where the player object's direction and action are continued. However, once the operating instruction is terminated then movement and direction are determined according to the processing described in col.12 ll.37-46. The proposed combination as well as the motivation for combining the references presented in the rejection of the parent claim applies to this claim and is incorporated herein by reference.

Claims 6, 7 and 17

37. Regarding claim 6, Kawagoe et al. discloses "A program execution system (40 in Figure 1) comprising: a program execution device (10 in Figure 1) having a controller that executes various programs (col.7 ll.3-7: "The external ROM 21 includes a plurality of memory areas (may

be hereinafter referred merely to as "areas"), i.e., a program area 22, an image data area 23 and a sound memory area 24, which are memorized previously and fixedly with various programs."); at least one operation device (45 of Figure 1) into which are inputted operation requests by a user as operation instructions to said program execution device (S503-S506 of Figure 9)." The remainder of the claim recites limitations similar in scope to those presented in claim 1, and are rejected with the rationale presented in the rejection of claim 1.

38. Likewise, claims 7 and 17 recite limitations similar in scope to those presented in claims 2 and 14, and are rejected with the rationale presented in the rejection of claims 2 and 14. The proposed combination as well as the motivation for combining the references presented in the rejection of claims 2 and 14 applies to this claim and is incorporated herein by reference.

Claims 9 and 18

39. Regarding claim 9, Kawagoe et al. discloses "a program execution device (10 in Figure 1) to which can be connected at least an operation device (45 of Figure 1) that outputs operation requests by a user as operation instructions (S503-S506 of Figure 9), said program execution device comprising." The remainder of the claim recites limitations similar in scope to those presented in claim 1, and are rejected with the rationale presented in the rejection of claim 1.

40. Claim 18 recite limitations similar in scope to those presented in claim 14, and are rejected with the rationale presented in the rejection of claim 14.

Claim 13

41. Regarding claim 13, Kawagoe et al. discloses "a program execution system (40 in Figure 1) comprising:

j. a program execution device (10 in Figure 1) having a controller, and executing various programs (col.7 ll.3-7: "The external ROM 21 includes a plurality of memory areas (may be hereinafter referred merely to as "areas"), i.e., a program area 22, an image data area 23 and a sound memory area 24, which are memorized previously and fixedly with various programs.");

k. a display device that displays images outputted from said program execution device (30 as shown in Figure 1).;

l. at least one operation device into which are inputted operation requests by a user as operation instructions (S503-S506 of Figure 9; 45 of Figure 1) to said program execution device, said operation instructions associated with movements of a character displayed on said display device (col.6 ll.31-35: " Accordingly, the resultant X-axis and Y-axis vector determined by the count values of the counters 444X and 444Y serves to determine a moving direction and a coordinate position of the player object or hero character or a cursor.");

m. said display device further comprising a first viewpoint in which movements of said character is controlled in accordance with a first movement coordinate system, and a second viewpoint in which movements of said character is controlled in accordance with a second movement coordinate system (col.11 ll.26-31: "In the step S7 a camera process is carried out. For example, a coordinate of a visual point to the object is calculated such that a line or field of sight as viewed through a viewfinder of the virtual camera comes to an angle designated through the joystick 45 by the player."; note that different cameras have different lines of sight),

n. an image processing means configured as a controller program that operates in said controller in said program execution device (442 control circuit), wherein said image processing means further comprises:

o. a first computation means that determines position coordinates of said character in said first display device viewpoint, said position coordinates based on a first motion vector of said character in said first display device viewpoint in accordance with operation instructions (col.6 ll.31-35: " Accordingly, the resultant X-axis and Y-axis vector determined by the count values of the counters 444X and 444Y serves to determine a moving direction and a coordinate position of the player object or hero character or a cursor."),

p. a viewpoint switching means that switches from said first display device viewpoint to said second display device viewpoint if necessary based on said position coordinates of said character (col.14 ll.42-*44: "...the camera is switched depending upon* a position of the player object (X-*Y coordinate position)...."*),

q. a second computation means that determines position coordinates of said character in said second display device viewpoint, said position coordinates based on a second motion vector of said character in said second display device viewpoint in accordance with operation instructions (operates the same as the first described in col.6 ll.31-35; col.11 ll.26-31), and

r. an image drawing means that draws a three-dimensional image of said character in said first or second display device viewpoint, in accordance with said position coordinates of said character obtained by said first computation means and second

computation means respectively (col.11 ll.31-35: "In the step S8 the RSP 122 performs a rendering process. That is, the RCP 12 under the control of CPU 11 performs transformation (coordinate transformation and frame memory rendering) on the image *data to display a movable object..."*),

s. the movement of said character is consistent between first and second display device viewpoints while said operation instruction is maintained during and immediately after said switch between said viewpoints (*See Kawagoe's discussion of exiting one area* and entering another in col.13 ll.55-*65, where the player object's direction* and action are continued.),

t. once said operation instruction is terminated after said switch from said first display device viewpoint to said second display device viewpoint, said second motion vector governing movement of said character in said second display device viewpoint is controlled in accordance with said second movement coordinate system (col.12 ll.37-46: *"If the player object is not in a course of action, the CPU 11 in the following step S503* detects an operation state of the joystick 45 (FIG. 1, FIG. 4) included in the controller 40. Subsequently, a moving direction, moving speed and position and pose of the player object are determined respectively in steps S503, S504 and S505, according to an operation state of the joystick 45"; Specifically, once the moving direction is determined according to the current viewpoint, and the user reenters an operation state of the joystick then the action is determined with respect to the new viewpoint as shown by col.11 ll.26-31.)

u. said second motion vector governing movement of said character in said second display device viewpoint is controlled in accordance with said second movement coordinate system (second and subsequent vectors will be determined according to the processing described in col.6 ll.31-35).

42. Kawagoe et al. does not show "wherein if said operation instruction is maintained during a switch from said first display device viewpoint to said second display device viewpoint, said second motion governing movement of said character in said second display device viewpoint is controlled in accordance with said first movement coordinate system, wherein said second computation means and said image drawing means are repeatedly executed for as long as said operation instruction is maintained by said user"

43. Regarding claim 13, Iizuka et al. disclose "wherein if said operation instruction is maintained during a switch from said first display device viewpoint to said second display device viewpoint, said second motion governing movement of said character in said second display device viewpoint is controlled in accordance with said first movement coordinate system, wherein said second computation means and said image drawing means are repeatedly executed for as long as said operation instruction is maintained by said user" (col.10 ll.29-36: "As described above, the present embodiment allows the direction in which the player character is to move to be fixed even if the input direction with respect to the direction of line of sight changes within the specific area when the moving direction of the player character is decided by the input direction with respect to the direction of line of sight"; the direction in the image changes due to the camera change even though the input direction is fixed with respect to the first camera as described at col.8 ll.45-49: "Further, when the input direction of the directional key is fixed, the

direction in which the player character is to move changes in a game picture presented while moving the virtual cameras (line of sight) as shown in *FIG. 9."*) , "only thereafter, when the operation instruction is changed to another operation instruction, after the switching of the viewing perspective, a direction of motion of the character is calculated based on the second fixed viewing perspective." (after switching viewpoints another operating instruction is obtained from 1105 from 1105 when in an area as described at col.9 ll.8-15: " The specific area is a unit formed into the loop in the present embodiment. When the area judging unit 1003 judges that the player character is staying within the specific area, the movement processing unit 1002 calculates the position coordinates of the player character based on not the input direction indicated by the directional key but on a movement instructing direction generated inside in place of the input direction").

44. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use Iizuka's directional control in the game system disclosed by Kawagoe et al. The motivation for doing so would have been to eliminate the need for a player to abruptly change the direction on the joystick to accommodate a change in camera angle as the player traverses the camera area. Therefore, it would have been obvious to combine Kawagoe with Iizuka et al. to obtain the invention specified in claim 13.

45. Iizuka's processing associated with specific sections (steps 1405, 1406, and 1407) is similar to Kawagoe's actions (S502) in that the position of the player character is computed from predefined instructions. Kawagoe et al. discloses determining position based on action data (S502: determine Position and pose of player object depending on action content) and only after the action is finished, a direction of motion of the character is calculated and its position then

determined based on a position of the character and a motion direction from the operation instruction (col.12 ll.44-46: "Subsequently, a moving direction, moving speed and position and pose of the player object are determined respectively in steps S503, S504 and S505, according to an operation state of the joystick 45."). The difference between Iizuka and Kawagoe is that Kawagoe's uses the input direction after the action is finished while keeping the camera perspective fixed.

46. At the time of the invention, it would have been obvious allow Kawagoe's user to input subsequent directions relative to the new fixed viewpoint, after initially maintaining the direction while the switching the camera as taught by Iizuka. In particular, Iizuka explains maintaining the player's direction after switching cameras eliminates the need for the user to synchronize a change in input direction with the change in camera orientation. See Iizuka col.8 ll.50-56. After the new viewpoint has been fixed as in Kawagoe's areas and the user enters subsequent operation instructions, Iizuka's method of substituting programmed directions for user input is no longer needed. Therefore, one of ordinary skill in the art would have been motivated to return control to the user when "the operation instruction is changed to another operating instruction, after the switching of the viewing perspective," because returning control to the user would allow the user to explore, in all directions, the region imaged by the second fixed camera. Doing so would have been consistent with Kawagoe's teachings at col.12 ll.44-46 and Figure 5, which also returns control to the player after an action has been performed. Therefore, it would have been obvious to combine Kawagoe and Iizuka to obtain "only thereafter, when the operation instruction is changed to another operation instruction, after the switching of the viewpoints, a direction of motion of the character is calculated based on the second viewpoint, and its position

then determined based on a position of the character and a motion direction from the operation instruction."

Claim 20

47. Regarding claim 20, Kawagoe et al. discloses "a program execution system (40 in Figure 1) comprising:

v. a program execution device having a controller (44 in figure 4), and executing various programs (20 shown in Figure 1; col.7 ll.3-7: "The external ROM 21 includes a plurality of memory areas (may be hereinafter referred merely to as "areas"), i.e., a program area 22, an image data area 23 and a sound memory area 24, which are memorized previously and fixedly with various programs.");

w. at least one operation device into which are inputted operation requests by a user as operation instructions to said program execution device (S503-S506 of Figure 9; 45 of Figure 1);

x. a display device that displays images outputted from said program execution device (30 as shown in Figure 1).; and

y. an image processing means configured as a program (22 in Figure 5) that operates in said controller in said program execution device (col.7 ll.3-7);

z. wherein said image processing means includes:

i. a first computation means that determines at least position coordinates of a character in a scene on the display device from a motion vector of the character based on an operation inputted by the user (col.6 ll.31-35: " Accordingly, the resultant X-axis and Y-axis vector determined by the count values of the counters

444X and 444Y serves to determine a moving direction and a coordinate position of the player object or hero character or a cursor.") as seen from a first viewpoint (col.11 ll.26-31: "In the step S7 a camera process is carried out. For example, a coordinate of a visual point to the object is calculated such that a line or field of sight as viewed through a viewfinder of the virtual camera comes to an angle designated through the joystick 45 by the player."),,

ii. a viewpoint switching means that switches a current viewpoint if necessary based on said position coordinates of said character (col.14 ll.42-44: *"...the camera is switched depending upo*n a position of the player object (X-Y *coordinate position)...."*),

iii. an operation input decision means that decides whether an operation input from at least one operation device maintains before and after the viewpoint switching means switches the current viewpoint (col.12 ll.37-*46: "If in a course* of action, a position and pose of the player object are determined so that the *player object continues its action... If the player object is not in a course of* action, the CPU 11 in the following step S503 detects an operation state of the joystick 45 (FIG. 1, FIG. 4) included in the controller 40. Subsequently, a moving direction, moving speed and position and pose of the player object are determined respectively in steps S503, S504 and S505, according to an operation state of the *joystick 45."*); and

iv. a second computation means that determines at least position coordinates of the character in the scene on the display device from a motion vector of the

character based on an operation inputted by the user as seen from a second viewpoint (col.6 ll.31-35; col.11 ll.26-31 as cited above),

v. an image drawing means that draws a three-dimensional image of said character based on said current viewpoint (col.2 ll.6-10: "…image signal generating means for generating an image signal due to shooting the player object by a virtual camera selected by the camera selecting means."), in accordance with said position coordinates of said character obtained by said first computation means or said second computation means (col.11 ll.31-35: "In the step S8 the RSP 122 performs a rendering process. That is, the RCP 12 under the control of CPU 11 performs transformation (coordinate transformation and *frame memory rendering) on the image data to display a movable object…"*).

48. As shown in the rejection of claim 3, the limitation "wherein the second computation step determines at least position coordinates of the character in the scene after switching the viewpoint, when the operation input decision means decides the operation input from the operation device is maintained, as long as an operation is inputted by the user before switching the viewpoint, by using the motion vector of the character motion based on the operation"; "only thereafter, when the operation instruction is changed to another operation instruction, after the switching of the viewpoints, a direction of motion of the character is calculated based on the second viewpoint" is met by the combination of Kawagoe et al. and Iizuka et al. The proposed combination as well as the motivation for combining the references presented in the rejection of claim 3 applies to this claim and is incorporated herein by reference.

49. Iizuka's processing associated with specific sections (steps 1405, 1406, and 1407) is similar to Kawagoe's actions (S502) in that the position of the player character is computed from predefined instructions. Kawagoe et al. discloses determining position based on action data (S502: determine Position and pose of player object depending on action content) and only after the action is finished, a direction of motion of the character is calculated and its position then determined based on a position of the character and a motion direction from the operation instruction (col.12 ll.44-46: "Subsequently, a moving direction, moving speed and position and pose of the player object are determined respectively in steps S503, S504 and S505, according to an operation state of the joystick 45."). The difference between Iizuka and Kawagoe is that Kawagoe's uses the input direction after the action is finished while keeping the camera perspective fixed.

50. At the time of the invention, it would have been obvious allow Kawagoe's user to input subsequent directions relative to the new fixed viewpoint, after initially maintaining the direction while the switching the camera as taught by Iizuka. In particular, Iizuka explains maintaining the player's direction after switching cameras eliminates the need for the user to synchronize a change in input direction with the change in camera orientation. See Iizuka col.8 ll.50-56. After the new viewpoint has been fixed as in Kawagoe's areas and the user enters subsequent operation instructions, Iizuka's method of substituting programmed directions for user input is no longer needed. Therefore, one of ordinary skill in the art would have been motivated to return control to the user when "the operation instruction is changed to another operating instruction, after the switching of the viewing perspective," because returning control to the user would allow the user to explore, in all directions, the region imaged by the second fixed camera. Doing

so would have been consistent with Kawagoe's teachings at col.12 ll.44-46 and Figure 5, which also returns control to the player after an action has been performed. Therefore, it would have been obvious to combine Kawagoe and Iizuka to obtain "only thereafter, when the operation instruction is changed to another operation instruction, after the switching of the viewpoints, a direction of motion of the character is calculated based on the second viewpoint, and its position then determined based on a position of the character and a motion direction from the operation instruction."

**Claim Rejections - 35 USC § 101**

51. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

**52. Claims 1-3, 11, 12, 14, 15, and 19 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.**

**53.** Claims 1-3, 11, 12, 14, 15, and 19 are directed to a "recording medium." The specification is silent with respect to the definition of a "recording medium." The broadest reasonable interpretation of a claim drawn to a computer readable medium typically covers forms of non-transitory tangible media and transitory propagating signals per se in view of the ordinary and customary meaning of computer readable media. See Subject Matter Eligibility of Computer Readable Media, 1351 OG 212 (26 Jan 2010). See MPEP 2111.01. Signals are nothing but the physical characteristics of a form of energy, and as such is nonstatutory natural phenomena. See, e.g., In re Nuitjen, 500 F. 3d 1346, 1357 (Fed. Cir. 2007)("A transitory, propagating signal like Nuitjen's is not a process, machine, manufacture, or composition of matter.' … Thus, such a signal cannot be patentable subject matter."). In this case, a recording

medium encompasses signals because applicant has not defined a "recording medium" in the claims or the specification with sufficient particularity so as to exclude non-transitory embodiments, and a signal records data even if only to transmit the data from one location to another. Thus, claim 1-3, 11, 12, 14, 15, and 19 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

**54.** To expedite a complete examination of the instant application, the claims rejected under 35 U.S.C. 101 as non-statutory subject matter are further rejected as set forth below in anticipation of applicant amending the claims to place them within the four categories of invention.

**Response to Arguments**

55. Applicant's arguments filed 08 December 2010 have been fully considered but they are not persuasive.

56. Applicant's argument that the claimed invention is patentable because "Iizuka does not make use of the character direction from the user's instruction when it is calculating the particular position in the area" is not persuasive. Specifically, it would have been obvious to arrive at the claimed invention in view of the teachings of Kawagoe et al. and Iizuka et al., as presented in this action's rejection. Iizuka explains that maintaining the player's direction after switching cameras eliminates the need for the user to synchronize a change in input direction with the change in camera orientation. See Iizuka col.8 ll.50-56. After the new viewpoint has been fixed as in Kawagoe's areas (Figure 11) and the user enters subsequent operation instructions, Iizuka's method of substituting programmed directions for user input is no longer

needed. Thus, it would have been obvious allow the user to input subsequent directions according to the new viewpoint as recited in the claim.

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON M. REPKO whose telephone number is (571)272-8624. The examiner can normally be reached on Monday through Friday 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached on (571)272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason M Repko/
Primary Examiner, Art Unit 2628